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could not fly, and thus became an easy prey to the wolves, foxes, wild cats, minks, etc., which exterminated almost the entire race." Like weather conditions may have prevailed in Iowa, and a similar disaster may have overtaken the Wild Turkey; if so, its story has not survived their disappearance.

NOTES ON THE SAGE HEN.

BY S. S. VISHER.

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The Sage Grouse (*Centrocercus urophasianus*) is in many respects one of the most interesting of the birds of many portions of the west. The cock is almost as large as a hen turkey, so he is big enough to attract anyone's attention. All grouse are wonderfully effectively colored from the standpoint of protection. Some, of which the sage hen is one, have so much confidence in their invisibility that they have been dubbed "Fool Hens," because they allow such close approach. It is astonishing how completely hidden a sage chick can be, even on bare ground. Many a time I have come upon a mother walking conspicuously along with her brood. When she flew they would squat low on the short grass and disappear from sight. It is a mighty good test of acuteness of observation to then try to find all the young. Perhaps some may be located quite easily, but others, "in plain sight," will not be seen until they fly almost from under one's feet.

As the name implies, sage hens are found in areas where the sage brush (chiefly *Artemesia tridentata*) is abundant. Formerly they were found in many sections of western South Dakota and westward. The last ones recorded from this state, except in the northwestern corner, were found in Sage Creek in the Badlands in 1907. By 1910 all were gone except those in Harding and Butte Counties. Now (1913), after three more years of homesteading, Sage Grouse are restricted in this state to the Little Missouri Valley in Harding County and to the headwaters of Indian Creek in Butte.

In a very few years they will occur in South Dakota only as a rare winter straggler from Montana.

This widespread extermination of the Sage Grouse is in spite of the fact that the flesh of all but the youngest sage hens tastes so strongly of sage that they are not usually considered edible. Sage hens are somewhat destructive to gardens and are sometimes killed as pests. The young, which are easily shot with a .22 rifle, are used extensively as food.

Polygamy among wild birds is very rare and the Sage Grouse is one of our few examples. The mating dance takes place in April and May and lasts from dawn till well along in the forenoon. Upon an open grassy slope as many as fifty of these stately birds will gather. The cocks walk about with tail widespread and the neck much distended by the inflation of the air sacs. Upon approaching a female the male drags one wing on the ground. From time to time the cock utters a dull ringing note, which can be heard but a very few rods. The females seem to pay little attention to the dance, nor do they select mates in any obvious manner, since several are looked upon with favor during a single morning.

The nest is made in a slight depression and contains from seven to nine spotted eggs. The young remain with the mother until winter. They spend the night, not on the lower flats along streams, where most of the day is spent, but on the edge of upland, frequently near the border of a patch of sand grass. The flock sleep within a few feet of each other. The mother clucks to her very young chicks after the same manner as does the domestic hen.

During the summer the cocks congregate together, while unfortunate females are solitary. Sage hens require drinking water and are hence found near waterholes. Since a few small trees are usually found near our permanent pools the most frequent place to find sage hens in the heat of the day is sprawled out in the shade of the single tree, or under a nearby "cut bank."